CLAIMS

What is claimed is:

1. An image forming apparatus performing a printing operation with respect to printing data transmitted from an external device, the image forming apparatus comprising:

a printing engine unit performing the printing operation with respect to the printing data;

a printing control unit connectable to the external device, controlling the printing engine unit to perform the printing operation with respect to the printing data transmitted from the external device; and

an image processing unit removably disposed in the image forming apparatus, transforming the printing data transmitted from the external device to image data to be processed by the printing engine unit;

wherein the image processing unit is connected to the printing control unit through a local BUS when the image processing unit is mounted in the image forming apparatus.

2. The image forming apparatus of claim 1, wherein the printing control unit controls the printing engine unit to perform the printing operation with respect to data that is image-processed and transmitted from the external device in response to the image processing unit not being mounted in the image forming apparatus.

3. The image forming apparatus of claim 1, wherein the image processing unit comprises:

a first interface transmitting/receiving the printing data to/from the external device;

a central processing unit controlling general operations of the image forming apparatus; and

a storage portion storing a control program to control the image processing unit and the image data that is generated during the image processing.

4. The image forming apparatus of claim 3, wherein the image processing unit transforms the printing data to the image data to be processed by the printing engine unit upon receipt of the printing data from the external device through the first interface, and outputs the transformed image data to the printing control unit, and the printing control unit controls the printing engine unit to perform the printing operation with respect to the image data transformed and transmitted from the image processing unit.

5. The image forming apparatus of claim 3, wherein the storage portion comprises a ROM storing the control program of the central processing unit.

6. The image forming apparatus of claim 3, wherein the storage portion comprises a RAM temporarily storing the data generated during the image processing.

7. The image forming apparatus of claim 3, wherein the storage portion comprises an EEPROM storing image processing unit control data, and managing a control establishment value.

8. The image forming apparatus of claim 3, wherein the storage portion comprises:

a ROM storing the control program of the central processing unit;

a RAM temporarily storing the data generated during the image processing; and

an EEPROM storing image processing unit control data, and managing a control establishment value.

9. The image forming apparatus of claim 1, wherein the printing control comprises a second interface that connects the printing control unit to the external device.

10. The image forming apparatus of claim 9, wherein the second interface comprises a USB unit.

11. The image forming apparatus of claim 1, wherein the printing engine unit comprises a mechatronics portion and a printing engine portion.

12. A driving method of an image forming apparatus performing a printing operation with respect to printing data transmitted from an external device, the driving method comprising:

detecting whether an image processing unit is mounted in the image forming apparatus, wherein the image processing unit transforms the printing data to image data to be processed by a printing engine unit performing the printing operation;

controlling the image processing unit to transform the printing data transmitted from the external device to the image data in response to the image processing unit being mounted in the image forming apparatus, and outputting the transformed data to a printing engine unit; and

controlling the printing engine unit to perform the printing operation with respect to the image data received.

13. The driving method of claim 12, wherein the controlling the printing engine unit to perform the printing operation with respect to the image data received comprises receiving the image data image-processed and transmitted from the external device in response to the image processing unit not being mounted in the image forming apparatus.

14. The driving method of claim 12, wherein the detecting whether the image processing unit is mounted in the image forming apparatus is performed by a sensor disposed at a position in which the image processing unit is mounted.

15. The driving method of claim 12, wherein the detecting whether the image processing unit is mounted in the image forming apparatus is performed by a signal communication in a local BUS, wherein the image processing unit is connected to the image forming apparatus through the local BUS.

16. An image forming apparatus performing a printing operation with respect to data transmitted from an external device, the image forming apparatus comprising:

a printing control unit; and

a removable image processing unit transforming the data transmitted from the external device and transmitting the data to the printing control unit;

wherein the printing control unit is connectable to the image processing unit and the external device, and receives image processed data directly from the external device in response to the absence of the removable image processing unit.

17. An image processing unit of an image forming apparatus, the image processing unit comprising:

an interface for transmission/reception of data with the external device;

a central processing unit controlling the image forming apparatus; and

a storage portion storing a program to control the central processing unit and data generated during image processing;

wherein the image processing unit is removable from the image forming apparatus.

18. An image forming system, comprising:

an external device; and

an image forming apparatus comprising:

a printing control unit, and

a removable image processing unit transforming data transmitted from the external device and transmitting the data to the printing control unit,

wherein the printing control unit is connectable to the image processing unit and the external device, and receives image processed data directly from the external device in response to the absence of the removable image processing unit;

wherein image forming system operates with or without the removable image processing unit.